

TALK

Large sediment encrusting trepostome bryozoans from glaciomarine Permian rocks of Tasmania, Australia.

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The Permian glaciomarine rocks of Tasmania contain trepostome bryozoan colonies that encrust soft sediments. These colonies have initially attached to hard substrates such as dropstones or brachiopod shells and have subsequently grown outwards across the sediment palaeosurface. Colonies are large, one complete specimen is 35cm in diameter, and an incomplete mold specimen likely had an original size of up to 80cm diameter. Slow sediment accumulation rates must have occurred to form low-profile colonies of such large size. Colonies are of *Stenopora crinita*, and *S. ovata*, and occur in rocks of Artinskian age. These species also occur as branching and hard substrate encrusting forms, and massive colonies of *S. crinita* are known from New South Wales.

The best preserved specimen is that of a *Stenopora crinita* from the Elephant Pass Limestone at St Mary's Pass, of late Artinskian age. This specimen is found in fossiliferous wackestones containing trepostome and fenestrate bryozoans, brachiopods and pectinid bivalves. The sediment encrusting specimen is 35cm at its greatest width and has a total specimen height of 6.5cm. However, when examined closely the specimen is composed of two layers of the same species, whereby the older lowermost encrusting form has been draped in sediment and the uppermost younger colony has subsequently re-grown. The lowermost surface shows the juvenile colony attached to a spiriferid shell and outward growth of the colony can be seen in successive undulating growth rings.

In Tasmania the genus *Stenopora* also forms large foliose colonies in shallow-water low sediment accumulation environments of the Sakmarian (*S. tasmaniensis*). The large sediment encrusting forms, however, have been found only in Artinskian rocks and so far only in the species *S. crinita* and *S. ovata*. The large sediment encrusting forms occur in offshore depositional environments, and their appearance in the Artinskian may be related to a combination of evolution of the genotype and its phenotypic expression, and the widespread development of suitable growth environments.